CONSERVATION

MADE IN MONTANA

MONTANA DNRC

2016 REPORT

FOREWORD

What happens when Montanans with a broad range of social and political interests join together to find solutions to our state's unique natural resource challenges? The result is conservation "Made in Montana." And the Department of Natural Resources and Conservation has been right in the thick of it, building, implementing and managing programs that protect or enhance our natural resources.

Now in its fourth year, DNRC's Forests In Focus initiative has provided $5.5 million dollars in cost-share assistance for forest stewardship work on state, private and tribal lands, along with state investment of $2 million toward forest-management projects on USFS lands. The partnership between DNRC and the Northern Region of the U.S. Forest Service has become a model for success in implementing the Farm Bill.

Governor Bullock's leadership brought together Montanans from the energy sector, mining, agriculture, wildlife, and natural resource fields for counsel on building a state-based conservation program for the greater sage grouse, a native bird imperiled by habitat loss across its historic range. Bipartisan support by the 2015 Legislature provided start-up funds, and DNRC staff and resources enabled the Montana Sage Grouse Habitat Conservation Program to get up and running in just six months.

After gaining approval by the 63rd Montana Legislature, a water compact between the State of Montana and the Confederated Salish and Kootenai (CSKT) tribes is in line to become the 18th and final compact negotiated by the Reserved Water Rights Compact Commission, and the seventh to address Indian water rights. Signed by Governor Bullock in April of 2015, the agreement was introduced in Congress in May of 2016 and had a hearing on June 29, 2016. And there could be even bigger news later this year for the Blackfeet Water Compact, which has been awaiting Congressional action since 2009.

These are landmark achievements for natural resource management, with far-reaching benefits for the state's lands and waters, economy and communities.

The stories in this report not only capture the important work we do for Montana's lands, soil and water, they allow you to meet some of the tremendous people who work for DNRC – their expertise, dedication and enthusiasm for public service and stewardship; they are the driving force in our success.

There's nothing more Montana than folks coming together from different backgrounds to find unique solutions to challenges. Please enjoy this celebration of what makes us so proud to call Montana our home.

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CONSERVATION MADE IN MONTANA

Treading New Ground

With a DNRC grant, a Helena farm family uncovers the importance of soil health.

Photos by Eliza Wiley

Marilyn, Jim and Tim Dusenberry on their Helena Valley farm. The no-till drill behind the tractor is a key component of the family's soil health initiative.

It was 2012 and the Dusenberry family was frustrated. Across their 600-acre farm and livestock operation in the Helena Valley, years of sound stewardship and management practices didn't seem to be making any real difference. "We were disappointed in the output of our land," says Tim Dusenberry. "We were using more and more fertilizer, the cost was up to 75 to 80 dollars an acre, and the returns were still low.

"It was time to look at a new way of doing things."

Linda Brander, a resource specialist with the Department of Natural Resources and Conservation, happened to be at the Dusenberry Farm in 2012 for her annual purchase of hay. As they stood visiting, she told Tim about a DNRC grant program she managed that had provided funding for several soil health projects. In order to be eligible, she told Tim, a producer need only work with the local Lewis and Clark Conservation District.

Change isn't always easy, and in the world of agriculture it can be especially difficult. Margins are thin under the best of circumstances and developing new management practices takes time and money—and what if the new approach doesn't work? For these and other reasons, many producers tend to stay with the methods used by their parents or grandparents. But Tim's parents, Jim and Marilyn, say their son has always been an innovator. After hearing about the program, Tim jumped on the Internet.

"I knew nothing of cover crops and had actually thought of them as a nurse crop," he says. "The phrase 'soil health' was foreign to me. After researching cover crops I was more excited about them and decided it would be a good experiment to see if it would work on our operation."

DNRC, the Lewis and Clark Conservation District and staff from the USDA's Natural Resource Conservation Service sat down with the Dusenberrys to help them develop their grant proposal.

The project launched in April of 2013. Three different plots were set up on a total of 64 acres, each with its own soil type and management issues. Through soil sampling and discussion with the Dusenberrys of their management goals, a unique seed mix of cover crops was developed and planted on each plot.

Cover crops

At its most basic, a cover crop is a mixture of plants seeded in late summer or fall on a harvested field. The specific combination of plants—from legumes such as peas to oats, grasses, clover, even radishes and turnips—is tailored to the management goals for the field. Radishes and turnips, for example, are effective in breaking up compacted soil. Legumes enhance nitrogen levels. When grazed by cows, plants with tall stalks such as oats are flattened and mashed into the soil by the animals' hooves, where they break down to add carbon and organic material. Cover crops can also be effective in mitigating the new year's crop of weeds.

Through his research, Tim also learned that a no-till drill was a key component for seeding cover crops. Pulled behind the farmer's tractor, a no-till drill lays the seeds in the ground with minimal disturbance, unlike a cultivator, which digs deep and breaks up the soil. The family purchased a used no-till drill at the start of the demonstration proj-

Cover crops can help break up compacted soil and reduce weeds.

> “I knew nothing of cover crops and had actually thought of them as a nurse crop. The phrase ‘soil health’ was foreign to me.” —Tim Dusenberry

Above: Mob rules—the Dusenberrys utilize mob grazing to build organic material in the soil. Below: healthy soil means happy earthworms, and lots of 'em.

ect and has been using it ever since.

"Healthy soil has voids within it," Tim says. "If you till it, you've crushed the soil and made those air spaces smaller. There's less room for microbes and roots and reduced capacity to retain water."

The most dramatic illustration of no-till benefits came in a 36-acre leased field. Every year Tim would cultivate and plant the field, and then watch as spring rains created a 5-acre "lake" in a low spot, which would drown out the crop. After the first year of no-till seeding, the lake was a bit smaller. The next year it was smaller yet. Without disturbance the soil was rebuilding those open spaces, increasing its capacity to absorb and hold moisture. "That spot has shrunk to basically nothing," Tim says. "No-till really saved us in this particular field."

Results

After two years of using cover crops, the results were "astounding," Tim says. As soil health improved, cash crop yields jumped up. Their calves, turned loose each year to graze the cover crops, put on more weight and sported deep glossy coats. Weeds were reduced.

In 2014 and 2015, the Dusenberrys added two more components to their soil health practices: a CO_2 injector and a new method for livestock grazing. The injector is a custom-built piece of equipment that collects the exhaust of the tractor engine, cools and condenses it, and blows it into the soil at the time of planting. The CO_2, says Tim, benefits mycorrhizal fungi, a group of living organisms which coexist with plants and help supply them with nutrients.

> "More and more, we're using nature as the driving force instead of chemical inputs."

Mob grazing, a kind of high-intensity, short-duration grazing practice, is the Dusenberry's latest soil health innovation, implemented late in 2015. Using portable electric fencing, a group of 30 cows are concentrated in small pasture "cells" of one to five acres, where they graze and stomp down the grass or cover crops and deposit manure and urine. The animals stay only a short time – between 24 and 36 hours—before being moved again. Each cell is then rested for an extended period. Over time, mob grazing builds the amount of organic material in the soil, boosting nutrients and moisture retention.

After four years, the gains at the Dusenberry farm are impressive. "We haven't used fertilizer at all in three years and our crop yields are bigger and better quality. Weeds are reduced, and we're hoping to eliminate part of the chemical cost associated with spraying," Tim says. "More and more, we're using nature as the driving force instead of chemical inputs."

Taking notice

The Dusenberry's new approaches have stirred up a fair bit of interest among Helena-area producers, says Chris Evans, supervisor of the Lewis and Clark Conservation District.

"Especially for the Helena area it was really phenomenal to see the success they had. People are seeing the need to cover the soil for moisture retention and protection from erosion in our arid, windy climate."

Ann McCauley develops and promotes the soil health workshops sponsored by the Montana Association of Conservation Districts (MACD). Last year, MACD held five workshops across the state; more than 600 people attended, a mix of traditional producers as well as younger folks just getting started. "It's exciting to see people realize, 'wow, there's a different way of doing this,'" she says. "We talk about the benefits from the soil health level on up to the marketplace. That's a big part of the sustainability equation, making it pencil out on the bottom line. There's time, there's money and there's the unknown. That's part of what the workshops address."

"If another producer was to ask me about doing a cover crop on their ground, I would explain that it is not a one-year quick fix," says Tim. "They have to be willing to change the way they view their farming operation. They need to stay with it, commit to the long term and look at the whole system—cover crops, CO_2, no-till, and getting animals on the ground to do their thing.

"For us, I think this is just the tip of the iceberg."

Five Steps to Soil Health

Limit soil disturbance
Limit mechanical soil disturbance. Use a no-till drill to seed crops

Leave armor on the soil
Allow cover crops to protect the soil from erosion, heat, cold

Allow roots to grow
Allow a living root to grow in the soil for as long as possible. Cover crops allow a plant root to feed the soil biology; that biology in turn feeds the plant.

Emphasize diversity
For cover crops, use a variety of plants with different functions. The cover crop mix should include at least 7-10 different species. Some improve nutrients, others provide ground cover

Animal impact
Allow cows, pigs and other stock to do what they do best—devour nutritious cover crops, stomp plant material into the soil and fertilize it with their manure

DNRC and Montana's Conservation Districts

The Montana Department of Natural Resources and Conservation works closely with Montana's 58 conservation districts (CDs), which encompass nearly 94 million acres. CDs are local governmental entities operated by non-paid elected and appointed officials, charged with planning and implementing soil, water, and other natural resource conservation activities. CDs also maintain permitting for activities that alter or modify perennial streams. DNRC's Conservation Districts Bureau provides general, technical, legal, financial and administrative support to Montana's CDs and 27 grazing districts; between 2010 and 2016, DNRC has provided $231,360.00 in grant funding to conservation districts for the Soil Health Initiative. ■

Safety Teamwork

PHOTO CREDIT: ELIZA WILEY

Success

DNRC's Fire & Aviation program protects lives, property, and natural resources while ensuring wildfire protection on all state and private lands. ▸▸

Putting well-trained, experienced, and well-equipped firefighters in the field plays a key role in the success of the DNRC Fire and Aviation Management Program.

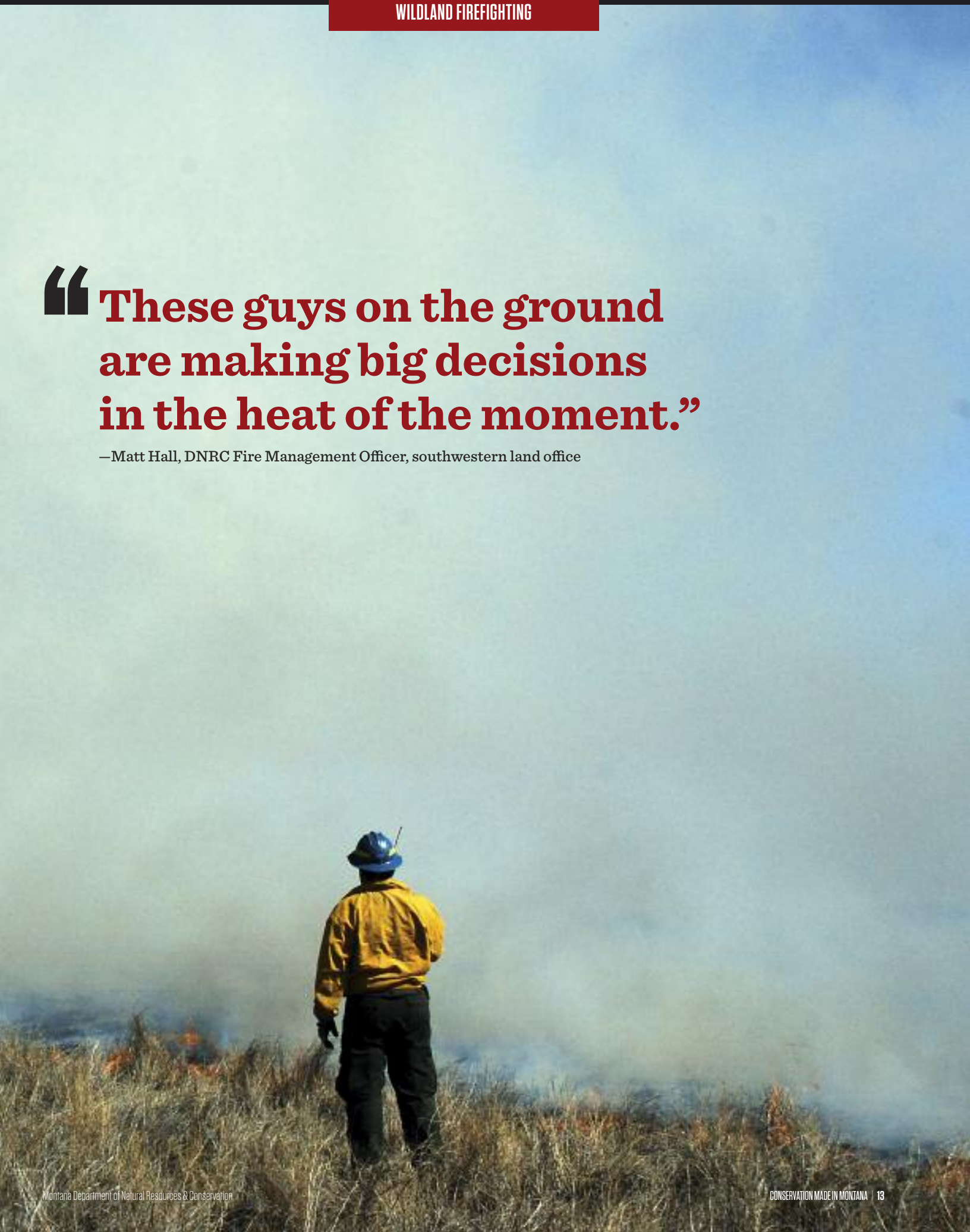
The DNRC is charged by state statute with providing wildland fire protection for state and private lands in Montana. The Department protects 45 million acres through the Department's State/County Cooperative Fire Program, and 5.2 million acres directly. Where the Department provides direct protection, the DNRC's firefighting resources include permanent staff, about 120 seasonal personnel, 65 fire engines and water tenders, three helicopters, and three light airplanes. These resources operate from 13 stations on the Department's 10 direct protection units. Four additional helicopters remain at the ready to move to the areas of greatest need across the state, in support of both cooperating counties and the DNRC direct protection units.

Between 2011 and 2015, DNRC firefighters on direct protection units attacked an average of 300 fires per year, with those fires burning just under 11,000 acres. The Department maintains a strategic goal of controlling 95% of the fires occurring on its direct protection at 10 acres or less; a milestone that the DNRC fire program has exceeded for nearly 25 years. Firefighting costs rise exponentially as fires grow larger. While suppressing a fire at 10 acres or less might cost Montana taxpayers $5,000, a 200-acre fire could easily cost 20 times as much. Large fires, over 5,000 acres, average over three million dollars to suppress—that's 600 times the cost of the average fire caught at 10 acres or less. Each year, a small percentage of the fires on DNRC protection, those over 10 acres in size, account for most of the fire suppression costs borne by Montana taxpayers. Consequently, the DNRC maintains a wildfire suppression strategy aimed at keeping small wildfires from becoming big wildfires through quick and effective action. Success at initial attack does more than suppress fires; it also minimizes risk to firefighters and other people, damage to natural resources and personal property, and the cost of fire suppression.

Three tenets—safety, teamwork, and success—guide the DNRC fire and aviation management program; and much of the DNRC's success derives from its cooperative approach, an essential component for a lean organization with a big job. Cooperative efforts between state, federal, and local agencies provide the cornerstone for wildland fire management in Montana. DNRC maintains a cooperative fire management agreement with five federal agencies including the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and the U.S. Forest Service. The interagency agreement spells out agency responsibilities, specifies mechanisms for cooperation, and recognizes DNRC as the entity that coordinates with local government firefighters and their departments. Separate cooperative agreements with all 56 of Montana's counties establish a rock solid relationship between DNRC and the State's more than 430 fire departments. Coordination between agencies limits duplication of effort and improves both efficiency and effectiveness. Whenever possible, the DNRC relies on its own firefighting personnel and equipment in order to control costs, but works hard to remain an active and influential player in the interagency system.

A tiered system of dispatch centers represents an important element to the cooperative approach. When a fire starts, the local dispatch center sends an initial response and additional resources as necessary. If a fire grows and exceeds the initial attack dispatch center's capacity, a higher level dispatch center gets involved to provide resources from outside the local area. If the fire continues to grow and has resource needs beyond those available from the broader area, dispatching and coordination expands to the Northern Rockies Coordination Center and, as necessary, the National Interagency Fire Center. By participating in this cooperative arrangement, the DNRC can tap an extensive array of regional, national, and international resources that Montanans could never afford on their own.

Putting well-trained, experienced, and



> **“These guys on the ground are making big decisions in the heat of the moment.”**
>
> —Matt Hall, DNRC Fire Management Officer, southwestern land office

Montana Department of Natural Resources & Conservation

well-equipped firefighters in the field plays a key role in the success of the DNRC Fire and Aviation Management Program. DNRC delivers a comprehensive training program that seeks to achieve the highest possible professional standards. The Department delivers hundreds of training courses each year, preparing more than 3,000 participants annually. Experienced personnel receive training at the highest levels to enable them to hold positions in incident command and management. The DNRC regards firefighter and public safety as its first priority, and a safety emphasis in both training and operations contributes to the DNRC's outstanding safety record.

At the DNRC's field offices, like the Missoula Unit, permanent employees like Ashleigh Burwick, who serves as Unit Fire Management Officer, all started out as seasonal workers, and each have 15 or 20 years of firefighting experience. "That veteran experience is where our safety factor comes in," says Matt Hall, who is the Fire Management Officer for DNRC's Southwestern Land Office. "These guys on the ground are making big decisions in the heat of the moment."

In addition to well-trained and experienced personnel, deploying top-notch equipment contributes to safety in the field. "Direct attack with our engines represents the backbone of our fire suppression system," says Mike DeGrosky, Chief of the DNRC's Fire and Aviation Management Bureau. The DNRC develops between 25 and 30 fire engines at its Equipment Development and Communications Center (EDCC) each year, and rotates new engines into the fleet each year. DNRC-built engines are state of the art: safe, dependable, easy to operate, and cost-effective, costing less than half the price of an equivalent commercial fire engine. Aviation resources also play a key role in the DNRC's fire suppression strategy. Airplanes make daily wildfire detection patrols during fire season, and the DNRC uses its helicopters to drop water and transport firefighters.

In addition to its work in developing and maintaining firefighting vehicles, the EDCC is also home to the DNRC's communications operations. Communications personnel install, repair, and maintain a statewide radio communications system consisting of more than 30 mountaintop repeaters and more than 1,200 handheld and mobile radios. During fire season, the communications personnel establish radio communications for wildland fire incidents using a variety of specialized equipment including tactical radio caches, portable fireline repeaters, temporary base stations and satellite phones.

A good part of the DNRC fire effort involves public education and outreach designed to prevent human-caused fires, which account for 65% of fires on DNRC protected lands. For example, much of Matt Hall's work involves working with three field units and five stations to battle the season's fires. However, Hall is also engaged with community outreach, landowner consultations, training workshops, and school visits. When Southwestern Land Office engines are on patrol in the field, it is an expectation that they are interacting with the public. "Having teams on the ground telling people about fire restrictions, or making suggestions to a landowner about clearing brush from around a home is a critical function," according to John Monzie, the DNRC's Deputy Chief for Operations. For DNRC engine crews, mostly made up of seasonal employees, every day includes physical training, a morning briefing, and then deployment to the field. If there isn't an active fire, engines are dispersed strategically to patrol in high-risk areas.

> **A good part of the DNRC fire effort involves public education and outreach designed to prevent human-caused fires**

Montanans have experienced some of the state's worst wildfire seasons in recent years with prolonged drought and unhealthy forests with fuel levels far exceeding historical norms contributing to the frequency of severe fire seasons. At the same time, increasing development in the wildland-urban interface places more people and structures at risk every year, and raises the likelihood that Montana communities will face the tremendous social, economic, and ecological costs of catastrophic wildfires. Accordingly, the DNRC places a premium on its ability to mount a rapid initial attack and to control fires that escape initial attack as quickly as possible; with a high priority placed on firefighter safety and protecting persons, personal property, and natural resources from damage by wildfire.

Montana Department of Natural Resources & Conservation

FORMULA FOR SUCCESS:

Montana's Sage-grouse Program

Montana has a cutting edge sage-grouse conservation program. Built from the ground up after a three-year conversation among diverse Montanans, the program is part of Montana's comprehensive conservation strategy for sage-grouse, which led the U.S. Fish and Wildlife Service in September of 2015 to decide the bird did not warrant protection as a threatened or endangered species under the federal Endangered Species Act. ▸▸

Hosted by DNRC, the staff implements Governor Steve Bullock's 12-2015 and 21-2015 Executive Orders and the Greater sage-grouse Stewardship Act of 2015 as its blueprint. Across the 38 counties with habitats designated for conservation, activities requiring a permit—oil or gas pipelines, subdivisions, irrigation works, wind farms and other forms of human disturbance to the land—are required to undergo a review process. It's the New Normal. A good many people don't necessarily like it, but everyone agrees the alternative—federal management of an endangered species—would be far more problematic for the state's economy. And the clock is ticking. In five years, the U.S. Fish and Wildlife Service will again review the status of the greater sage-grouse in the West. If the Montana population is holding its own along with 10 other western states, Montana will likely maintain control of the conservation effort.

MONTANA SAGE GROUSE
HABITAT CONSERVATION PROGRAM

"When Montanans from diverse viewpoints put aside their differences and focus on addressing a challenge, we can accomplish great things for our state," said Governor Steve Bullock. "Montanans recognize that it is in the best interest of our state, its economy, and our quality of life to maintain state management of the greater sage-grouse. Taking the necessary steps to curtail habitat fragmentation and loss of sagebrush is a shared sacrifice, but one that provides a home-grown solution to conserving this iconic bird, first described by the Lewis and Clark Expedition near the mouth of the Marias River."

The sage-grouse Habitat Conservation Program's work to fully implement Montana's strategy launched a mere six months ago. Montana's "core areas" approach identifies key habitats where Montana can conserve 76-80% of the breeding males on about 28% of Montana's landscape.

What does it take to conserve Montana's sage-grouse while maintaining economic activity? Carolyn Sime, manager of the program, says that proactive planning and collaboration are the key. "We have found proponents are very open to our suggested modifications to the location of a project or the timing of its implementation to avoid and minimize impacts to sage-grouse," she said. "Effective conservation in Montana requires an 'all hands, all lands' approach where we work cooperatively with business interests,

PHOTO COURTESY JEREMY ROBERTS, CONSERVATION MEDIA

The biggest threat to sage-grouse is habitat loss when sagebrush prairie is plowed up for wheat or corn, and from oil and gas development, wind farms, new subdivisions, and the roads built to access these activities.

> If the Bullock Administration had not taken this on, I believe we'd have a federally listed species. The governor's aggressive approach to sage grouse conservation has enabled us to stand a program up operationally in less than six months. By any measure, we've done a lot and I am proud of DNRC's efforts."
>
> **—John Tubbs,** *Director, Montana DNRC*

private landowners, and public land management agencies to find the best outcomes for the bird and for people."

In reviewing projects proposed in sage-grouse country, the program is guided by the mitigation hierarchy. The top priority is to avoid impacts to critical habitat and the seasonal activities of the birds, such as mating, nesting and brood-rearing. If there's no way to avoid a disturbance, the next-best alternative is to minimize it. Once a project is complete, it may be necessary to reclaim or restore habitat. The final tenet, compensate, means that if prime habitat must be given up to development, an equivalent amount must be identified or created somewhere else to replace what was lost.

The consultation process begins online at the state's sage-grouse Habitat Conservation Program web site. The client enters detailed information about the location and type of project using a GIS-based analytic tool created by DNRC. Next, program staff begin a review. They identify whether the project is located in one of three designated habitat classifications: core, general, or connectivity, each of which carries a set of guidelines for project development. Follow-up phone calls with the client help verify all aspects of the project. With all the information in hand, staff then determine how, where, and when the project can proceed, and what mitigations may be needed afterward.

Results of the consultation process are

PHOTO COURTESY TATIANA GETTELMAN

Montana is lucky to have landed Therese Hartman

A wildlife biologist, she worked eight years for the state of Wyoming's sage grouse conservation effort. In January of 2016, she came to Montana on a temporary assignment to help with the rollout of Montana's program. In April of 2016, she accepted Montana's job offer to join the program. Hartman's expertise in reviewing projects and working with businesses has been a major factor in the early success of the sage grouse program. DNRC's Web and GIS teams have also played a big role in getting the program underway.

The biggest misconception about the review process for activities in sage grouse country has to do with the individual attention given to each project.

"It's not a one-size-fits-all process," she says. "For example, I review a lot of pipeline projects and there are dozens of variables—is the pipeline above or below ground, where is it going in relation to core habitat, are there leks nearby, how wide is it, what kinds of equipment will be used to install it, how often will it need to be maintained? There's a unique solution for each project."

Project proponents are often surprised at the amount of information required. But, Hartman says the more details she has, the more readily she can facilitate a solution that works for the business while safeguarding the birds and their habitat.

Earlier this year, Hartman reviewed a proposal from the Federal Highway Administration to regrade 75 miles of Malmstrom Air Force Base access roads, many of which were located in core habitat, the most sensitive and important habitat. After reviewing each segment of road, Hartman worked with the agency to alter the construction activity start dates so there was no heavy machinery on the landscape near leks during the birds' mating and nesting periods. Auditory cues are an important aspect of breeding behavior. The review took less than three weeks.

"Our objective is not to be heavy-handed and tell people there are things they can't do," Hartman says. "But we are trying to implement Montana's conservation strategy to keep the sage grouse from being listed. That would change everything. People understand that. As long as the state has the lead for sage grouse conservation, we can work more cooperatively and proactively." ■

driven by how far away from active sage-grouse leks the activity would occur. Sage-grouse are very faithful to their leks, and some leks in Montana have been used for 80+ years. Too much habitat loss or fragmentation near leks will cause sage-grouse to abandon them, ultimately leading to population declines. Most project reviews are completed within two weeks, but sometimes within days. It all depends on where the proposed project is located and its size and complexity (see sidebar).

Soon after taking office in 2013, Governor Steve Bullock recognized Montana had fallen behind in sage-grouse conservation, and convened an advisory council for input on building a program.

"It became apparent early on that a significant amount of sage-grouse habitat and populations exist on private land," says Glenn Marx, a council member and director of the Montana Association of Land Trusts. "One of the reasons that's true is the very sound stewardship principles used by Montana landowners. We also recognized that conservation on private land had to be incentive-based and voluntary. You cannot regulate a solution on private land.

"We went throughout sage-grouse country to seek comments and recommendations," Marx says. "One refrain was, 'we do believe in sound stewardship, but if you want us to do something for sage-grouse, there's going to have to be some kind of incentive attached to it.'"

With bipartisan support, the 2015 Montana Legislature authorized $10 million for a Stewardship Fund Grant Program as part of the Greater sage-grouse Stewardship Act. Eligible projects include, for example, sagebrush habitat restoration, leases, and term or permanent conservation easements.

PHOTO COURTESY LORELLE BERKLEY, MONTANA FWP

> "Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy so protection under the Endangered Species Act is not warranted in the future."
>
> **—Steve Bullock,** *Governor of Montana*

Stewardship grants

On May 24, 2016, the state effort took another giant step forward when the Montana Sage-grouse Oversight Team met to review the first round of Stewardship Fund Grant proposals. A total of five projects were awarded: four are conservation easements that will permanently conserve 34,688 acres of core sage-grouse habitat on private lands in Phillips, Valley, Golden Valley, Petroleum and Fergus counties; the fifth grant, in Beaverhead County, will restore sagebrush habitat on 1,100 acres of core habitat on private land by removing encroaching conifer trees. The five grants totaled about $3 million.

The purpose of the Stewardship Fund is to fund voluntary conservation efforts primarily on private lands and keep working landscapes working. Sage-grouse require large, intact and interconnected expanses of sagebrush. About 70% of Montana's core areas are comprised of private or state school trust lands. "Montanans deservingly take great pride in their wildlife and their lands," said Sime. "Private landowners have played a significant role in conserving sage-grouse to date and these projects are a testament to their generations of stewardship."

Along with conserving or improving sage-grouse habitat, the grant awards will play a key role in building another component of Montana's conservation effort, a mitigation marketplace.

Stewardship Fund grants will generate conservation "credits" which can then be sold to developers who need to offset impacts of projects in designated sage-grouse habitats. Creating a mitigation marketplace provides flexibility to Montana's conservation strategy. The marketplace will provide economic incentives for landowners and developers to conserve and restore sagebrush habitats by making sage-grouse an asset, not a liability.

Diane Ahlgren is a lifelong rancher and the lone private landowner representative on the Montana sage-grouse Oversight Team. In February of 2016, Diane and her husband, Skip, were recognized for their outstanding commitment to promoting and leading conservation on private lands by the National Association of Conservation Districts. Their ranch in Petroleum and Garfield counties includes both core and general sage-grouse habitat. Asked if she has any special affinity for the birds, Ahlgren says, "No."

Sage-steppe prairie habitat is critical to sage-grouse

But getting involved in the state's conservation effort, she says, has been both necessary and a tremendous learning experience.

"I feel quite a sense of responsibility being the only producer on the Team. It's a little intimidating for me, I've never been involved in politics per se. On a lot of this stuff, as a producer, we feel somewhat defensive, and my first instinct was to say hell no, but I've been around long enough to see that doesn't work either, so I think the best solution is to be involved and try to be heard."

The biggest challenge so far, she says, has been getting familiar with the program. "It's really complicated, there's a big learning curve. But just learning the different perspectives and opinions has been a very good process for me. This group has been really impressive in that respect."

After 6 Oversight Team meetings, Ahlgren says, "I think the program has come an amazing distance in terms of what's been accomplished. The state was behind with this whole process. And I'm really glad the program has options for term leases and easements for conservation. In our county, we've had quite a bit of conversion [of native sagebrush grassland] to farmland. I'd like to see those folks have an opportunity to participate and compete for some of those [grant] funds."

Diane Ahlgren is a lifelong rancher and the lone private landowner representative on the Montana sage-grouse Oversight Team. "I think the program has come an amazing distance in terms of what's been accomplished," she says.

JACKIE JENSEN

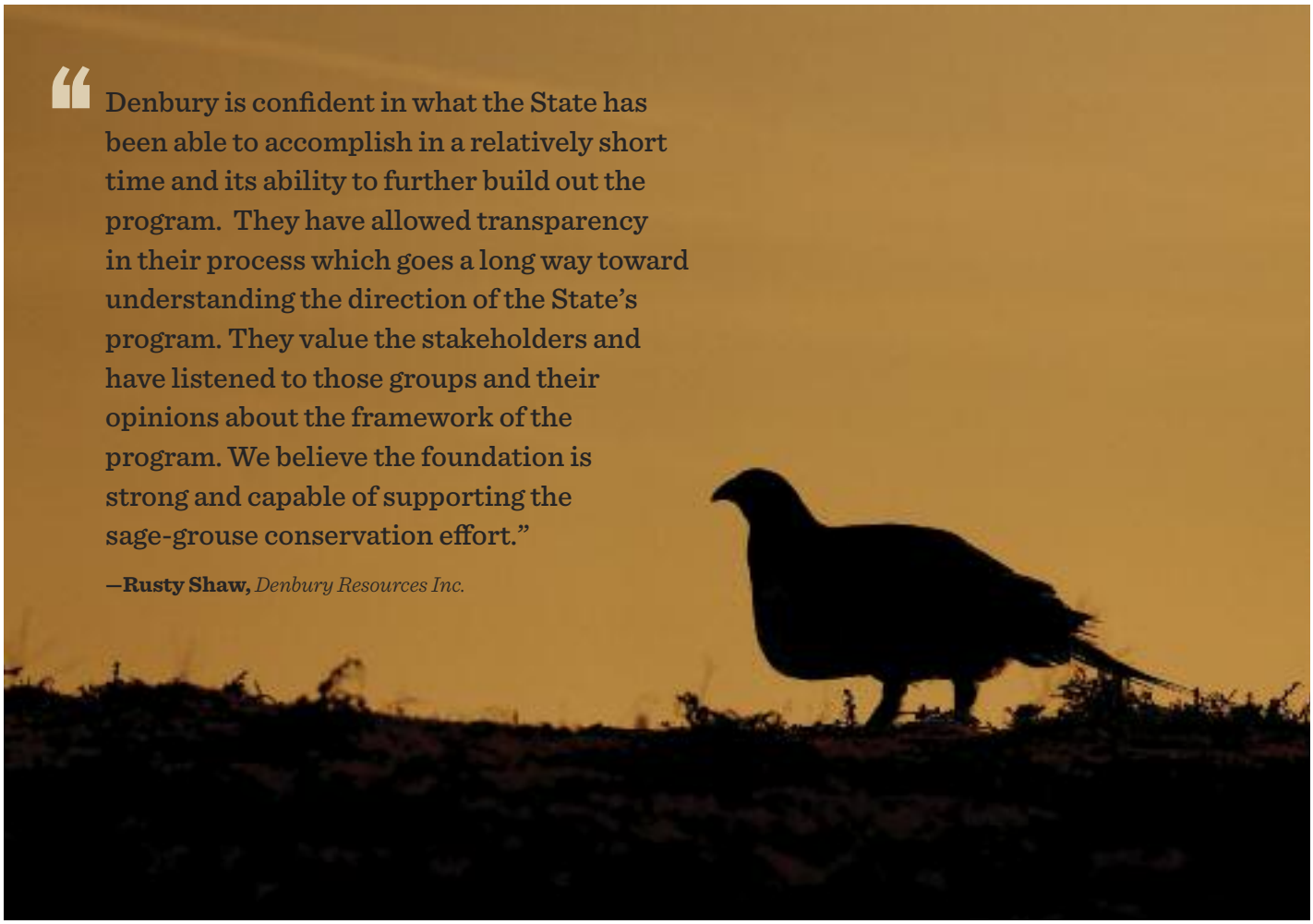
> "We are implementing SB 461 as best it can be done. We are establishing a base line by which sage grouse habitat and populations can be tracked. We are hoping the BLM will concur with our program and make our state united on all lands for sage grouse. We are moving slow, as we learn, but in a positive development [manner] for the bird, landowner and industry. If we continue the respect for the landowner, we will be successful."
>
> **—Representative Mike Lang,** *R-Malta Sage Grouse Oversight Team member*

Improving the program

Montana is already fine-tuning its strategy. For example, upgrades to the online GIS tool are underway. At its April 19, 2016, meeting, the Montana Sage-grouse Oversight Team commenced work on an agenda item entitled "Programmatic Exceptions from Executive Order 12-2015 Consultation Requirement." At first glance the matter seemed clear enough: amidst the large swaths of land designated "core" and "general" habitat were cities and towns. If a project was proposed within the boundaries of these municipal jurisdictions, should the sage-grouse consultation requirement apply?

The simple answer was 'of course not.' But as discussion ensued, Team members explored a host of scenarios. What about annexation? What about landfills and airports? Cemeteries? Wastewater treatment facilities? It was the kind of detailed, painstaking analysis that has characterized the early phase of the program, in which every situation is new and must be thoroughly considered.

After more than an hour of work on the subject, there was a natural pause as discussion wound down. Representative Mike Lang, R-Malta, the House representative to the team, offered a comment that summed up the day's business, and perhaps the entire effort to date. "My fear is turning to knowledge," he said.



> “Denbury is confident in what the State has been able to accomplish in a relatively short time and its ability to further build out the program. They have allowed transparency in their process which goes a long way toward understanding the direction of the State’s program. They value the stakeholders and have listened to those groups and their opinions about the framework of the program. We believe the foundation is strong and capable of supporting the sage-grouse conservation effort.”
>
> **—Rusty Shaw,** *Denbury Resources Inc.*

Sage-grouse numbers encouraging in 2016

PHOTO COURTESY U.S. FISH & WILDLIFE SERVICE

The most reliable means for estimating sage grouse populations is to survey the numbers of male grouse that congregate on leks each spring to compete for breeding females. The Montana Department of Fish, Wildlife & Parks (FWP) has surveyed sage grouse leks consistently for more than 30 years. Sage grouse populations are thought to be cyclical, rising and falling through roughly ten-year periods. In Montana, the most recent high point was in 2006 and 2007, after which survey numbers began to decline, reaching a low point in 2014. While it is too soon to credit conservation efforts, lek surveys in the spring of 2016 were 17 percent above the long-term average, about the same as was found in 2006 and 2007, and very encouraging; south-central Montana saw some leks with record numbers of males. FWP biologists also found birds on some leks that hadn’t been used for several years, and in some places grouse were found to have staked out brand new leks. ■

A MATTER OF TRUST

DNRC Land Use Specialist Jocee Hedrick inspects a Trust Lands grazing lease managed by rancher Justin Edwards.

More than a century ago, when Montana became a state—a time when the frontier was still open, gold rush booms came and went, and vigilante justice was alive and well—politicians were thinking about funding education. That's right, in the heart of the Wild West, legislators and politicians had the foresight to consider how schools would be supported. One of their strategies was the Trust Lands Program, in which two, 640-acre sections within each township, usually sections 16 and 36, were set aside to generate funds to help sustain Montana schools.

By Alan Kesselheim. Photos by Larry Mayer

Generations later, the Montana Trust Lands Program is alive and well and the DNRC is responsible for overseeing its operation. It has gotten more complicated over the decades. Some sections have been sold off or swapped. Separate land grants have been allocated here and there, but the basic structure remains unchanged. The royalties and rentals collected off of grazing leases, mineral rights and other income streams make a significant contribution to the school funding picture. In 2016, grazing leases alone, on 4.1 million acres of trust land, contribute roughly $19.5 million to the fund.

"Grazing land is often the biggest revenue generator," says Kevin Chappell, DNRC Agriculture and Grazing Bureau Chief. "Depending on the year, it's either mineral leases or grazing."

Trust lands are administered by the Montana Board of Land Commissioners, made up of the governor, attorney general, secretary of state, auditor, and superintendent of public instruction. In the grazing program, participating ranchers are charged per Animal Unit Month (AUM) on a fee scale that fluctuates with commodity (livestock) prices. In 2016, for example, each AUM costs $19.57. DNRC works directly with landowners to manage the land, ensuring healthy conditions for the future.

On the ground, that interaction is

personified by DNRC Land Use Specialists like Jocee Hedrick, who works out of the Billings office. It's hard to imagine a better fit for the job. Hedrick grew up in tiny, rural Faith, South Dakota.

"Our high school had about 75 kids," she says. "50 of us were on the rodeo team."

Her family was in the ranching business, and when Hedrick went to college, she got her degree from Montana State University in Rangeland Management. These days, she spends the bulk of her time in a truck or on a 4-wheeler, inspecting land, although she'd prefer to be on horseback.

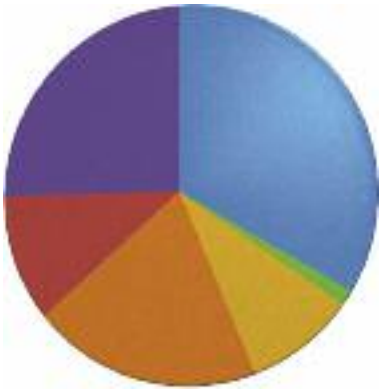
"I think I got the job because of one interview question," she says, laughing. "They asked me what I'd do if I got a flat tire way out in the boonies somewhere. I said, I'll have a jack and a lug wrench, won't I?"

Starting in the spring, as soon as the ground dries out, and continuing through October, Hedrick is out checking on the leases that come due for inspection. Typically, leases are renewed every 10 years. This summer Hedrick has 119 leases to inspect, which she figures works out to 2 every workday. Many leases take 2 or 3 hours to get to from her office.

"Being a girl who spends a lot of time out in the middle of nowhere," she says, "I try to be prepared."

Being prepared includes carrying a good map, a gps device, loading up the 4-wheeler in the back of the truck, and mentally preparing to be a diplomat in remote country where people can be prickly about their land.

Trust Lands revenues for Fiscal Year 2016, by activity/program:



Agriculture and Grazing:	$31.9 million
Recreational Use:	$1.2 million
Forest Management:	$8.6 million
Minerals Management:	$19.0 million
Real Estate Management:	$10.9 million
Other Revenue:	$24.2 million
TOTAL	**$95.8 million**

"My loyalty is to the trust. I'm protecting this land for a bigger cause, while balancing the needs of farmers and ranchers."

—Jocee Hedrick,
DNRC Land Use Specialist

Hedrick says she's never had any real conflict, but there are times when things get tense.

"It's mostly misunderstandings, when people think I'm trespassing," she says. Hedrick also has to navigate territory where ranchers' goals may not be in line with hers. "They are trying to get the best price for their cattle. I'm trying to keep the land in good shape for the long run. Because I grew up in a ranching culture, I know what they're dealing with. Interacting with ranchers is actually my favorite part of the job. Being a diplomat is a huge part of what I do."

That said, Hedrick is also very clear about her priorities. "My loyalty is to the trust," she emphasizes. "I'm protecting this land for a bigger cause, while balancing the needs of farmers and ranchers."

In late May, Hedrick heads out from Billings to check on a lease managed by Justin Edwards, who ranches some 8,000 acres near Sarpy Creek, northeast of Hardin. Recent rains have made the rolling country green and lush. The property spreads across shallow valleys, with ponderosa pine groves, rocky outcrops, grassy meadows.

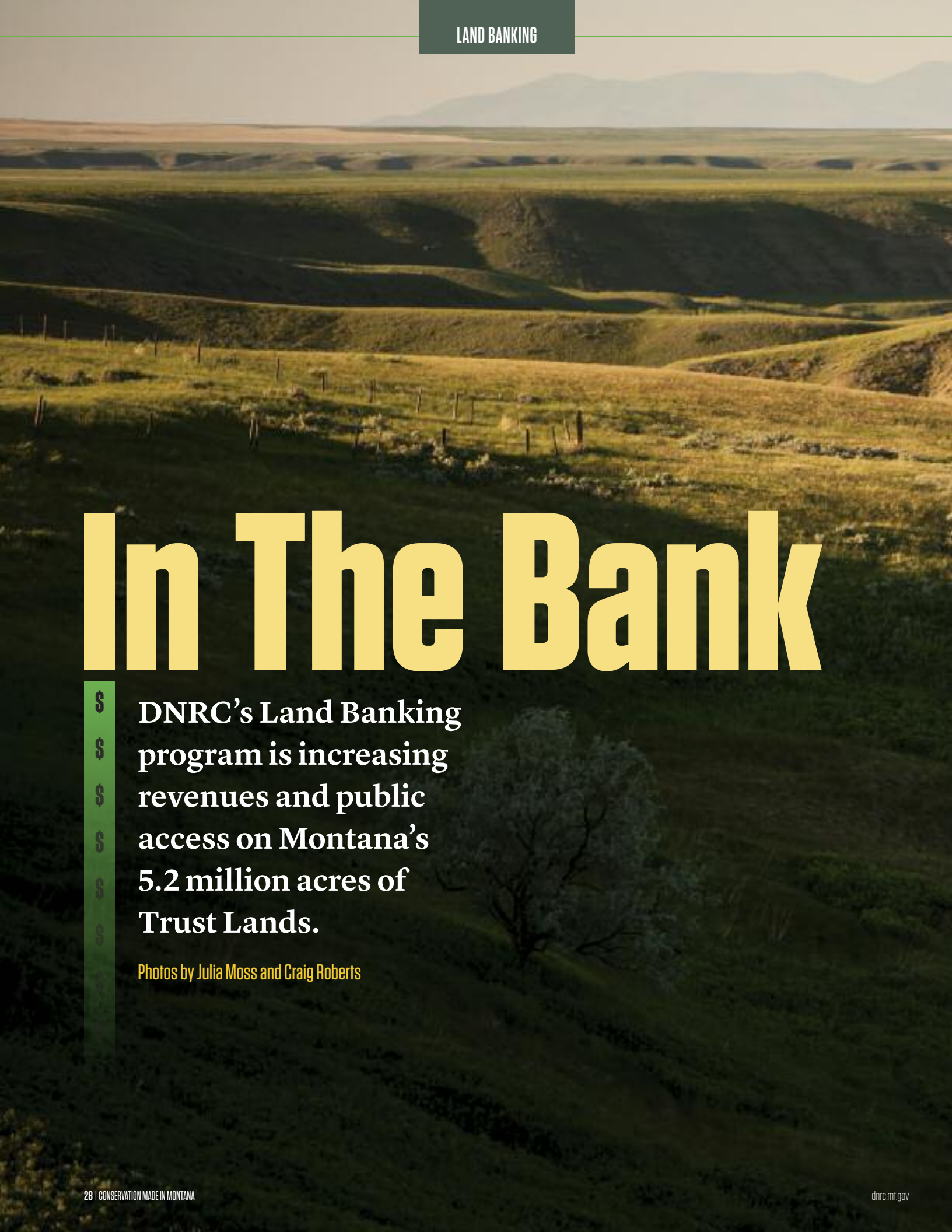
"Assessing a lease is a bit of an art," she says. "I don't have time to truly do a study, take samples, the kind of things I did in college courses. I have to be able to look it over, notice the mix of grasses, see what shape the soil is in, how it's been grazed."

She points out weeds, flowers in bloom, water holes, some western wheat grass that builds good soils. She meets Edwards along the road and they stop, cab to cab, to chat. Edwards invites her to follow him up to a high bench for an overview. Up a two-track through sparse ponderosa Edwards goes through a gate. Hedrick gets out to close it. They walk through the spring grasses and wildflowers to the edge of the bench, overlooking the leased land.

They discuss some measures Edwards took to improve the section – building fence, putting in strategic water tanks, allowing cattle to graze early and nip the cheatgrass before it went to seed, all steps negotiated with Hedrick. They agree that it is looking good.

"When I applied for this job, three or four years ago," Hedrick says. "I had no idea what trust lands were. Now, I see what a smart thing they did way back then.

"I am really lucky. I get to spend my time going to land that very few people ever get to see. Some of these spots are out of a postcard. But more than that, my job really does something for generations to come, something I can be proud of."



In The Bank

DNRC's Land Banking program is increasing revenues and public access on Montana's 5.2 million acres of Trust Lands.

Photos by Julia Moss and Craig Roberts

Less than twenty-four hours after DNRC had closed on its acquisition of the 2,563-acre Bullhead Ranch in Pondera County, Emily Cooper, who oversees the department's land banking program, received a phone call.

"It was a bird hunter," Cooper says. "He'd heard the state had acquired a new ranch and it had upland bird hunting. He wanted directions, and he wanted to know if there were any regulations he needed to know about."

Word travels fast when it comes to hunting opportunities on public land in 21st century Montana. Now in its eleventh year, the land banking program in DNRC's Trust Lands Management Division continues to build the value of Montana's state trust land portfolio by allowing the department to sell small, isolated, and less-productive parcels of state land, bank the proceeds, and use them to purchase larger blocks of land that offer a higher rate of return and have legal public access.

Since its inception, the land banking program has sold 318 properties totaling 68,060 acres—most of it classified for livestock grazing—and acquired 67,193 acres of land with agricultural, grazing or timber assets, or commercial development potential. Of the acreage sold, 84% did not have legal public access, while all of the lands acquired came with access.

Along with public access, the new properties yield a substantially higher rate of return, increasing revenue for the trust beneficiaries, which include K-12 public schools and Montana universities. Lands sold through land banking generated $201,571.00 annually; in 2015, acquired lands produced revenues of $467,568.00, an increase of 43%.

As Area Manager of DNRC's Northeastern Land Office in Lewistown, Clive Rooney has guided three Land Banking acquisitions to completion. "You have to be willing to sift through a lot of deals that don't materialize," Rooney says. "I've probably evaluated five potential acquisitions for every one that's gone through."

The State Land Board must review and

Erik Eneboe, a DNRC unit manager based in Conrad, led the acquisition process to purchase the 2,563-acre Bullhead Ranch north of Conrad.

approve each sale or purchase three different times. "For the selling landowner it's a very public process and it takes more than a year to complete," Rooney says. "It takes the right person who's willing to do that."

Managers like Rooney keep current on properties advertised in newspapers, but they're also part of the community. Sometimes they hear about a land sale before it reaches the market, and other times the right opportunity appears out of nowhere. That was the case in 2005 with the Wolf Creek Ranch northeast of Denton. Rooney had received a request for an easement across Trust Lands from an individual who wanted to build a home. Visiting the site with the applicant, Rooney took note of the adjacent property.

"It had a good combination of grazing land and crop potential," Rooney says. "Dry and irrigated hay ground, three creeks for stock water, in a really productive agricultural area. It had excellent recreation potential." The property wasn't on the market, but Rooney contacted the owner and learned he was interested in selling it.

The 1,842-acre ranch had another notable feature: it was located a half-mile away from the Beckman Wildlife Management Area, 6,568 acres of public land owned by Montana Fish, Wildlife & Parks. Situated between those two properties was another 1,200-acre parcel that was also for sale.

As it turned out, DNRC acquired the Wolf Creek Ranch and the conservation group Pheasants Forever bought the 1,200-acre parcel. With productive upland bird habitat and close proximity to 15,000 acres of public land, the Wolf Creek Ranch has become a destination for upland bird hunters. Along with its prime recreation opportunities for hunters, Wolf Creek produces a 2.13 percent rate of return on grazing, irrigated and dryland agriculture.

DNRC staff project that one of every three Trust Land properties does not have legal public access. The majority of these are smaller parcels less than 1,000 acres. A significant number of parcels are completely surrounded by private land; in those cases, the isolated parcel is almost always leased to the owner of the farm or ranch whose lands enclose it.

For the department, selling these properties provides the revenue needed to carry out its land banking mission. For farm or ranch owners, it's an opportunity to consolidate their holdings. The sale process is driven by landowners, most of them lessees. They nominate parcels for sale; department staff then initiate the approval process by the Land Board. Each parcel is approved by the Board three separate times—once for preliminary approval to evaluate the parcel's sale criteria; a second time to set the minimum bid the par-

Building upland bird habitat

Call it an asset, an amenity, a resource—to a ring-necked pheasant or sharp-tailed grouse, a mature shelterbelt is home. The mix of shrubs, trees and grasses create essential habitat for evading predators, roosting, and surviving the snow and bitter temperatures of winter; the more dense and tangled the shelterbelt, the more birds will make use of it.

When he evaluated the Bullhead Ranch, Erik Eneboe took notice of the shelterbelt adjacent to the old farmstead. "I'm a bird hunter and I was looking at this great big mature shelterbelt. There was some pretty good habitat."

Eneboe approached Montana Fish, Wildlife & Parks (FWP) to see if there was interest in maintaining it as a habitat improvement project. "It was all set to go," Eneboe says, "all it needed was fencing to keep out the cows." FWP agreed with Erik's assessment and entered into a contract with DNRC for a 72-acre habitat project; under the agreement, FWP pays DNRC for removing those acres from agricultural production.

DNRC considers opportunities for enhancing upland bird habitat on many of its Land Banking acquisitions. On 5,211 acres of grazing and farmland purchased in 2012 in Teton County, DNRC partnered with FWP and the local chapter of Pheasants Forever to set aside 50 acres for upland bird habitat, including a new eight-row shelterbelt. Erik and his staff take care of weed control and replace any shrubs or trees that die off; FWP covers the cost of the trees and shrubs; and Pheasants Forever pays for a contractor to water the new plants.

"We're committed to the project being a success," Eneboe says. "We monitor it, weed it and take care of it." ■

Mature shelterbelts (above) on the Bullhead Ranch provide good cover for upland birds like the sharptail grouse (below).

cel can be sold for at a public oral auction; and a final time to approve the auction results.

Erik Eneboe, a DNRC unit manager based in Conrad, has led the acquisition process on two major purchases, the 5,211-acre DeBrucker Farm in Teton County and the 2,563-acre Bullhead Ranch in Pondera County.

"The families that owned each property were concerned about the land being subdivided," says Eneboe. "I told them in all likelihood if DNRC was the buyer, their property would be maintained in agricultural status forever. That was very important to them."

The Bullhead Ranch is set to become one of the highest-producing properties in the ag/grazing portfolio, with a 4.5 percent rate of return. "It's a great mix of assets," Eneboe says, "we have grazing land, CRP, irrigated cropland producing hay and barley, and dryland acreage for wheat or pulse crops.

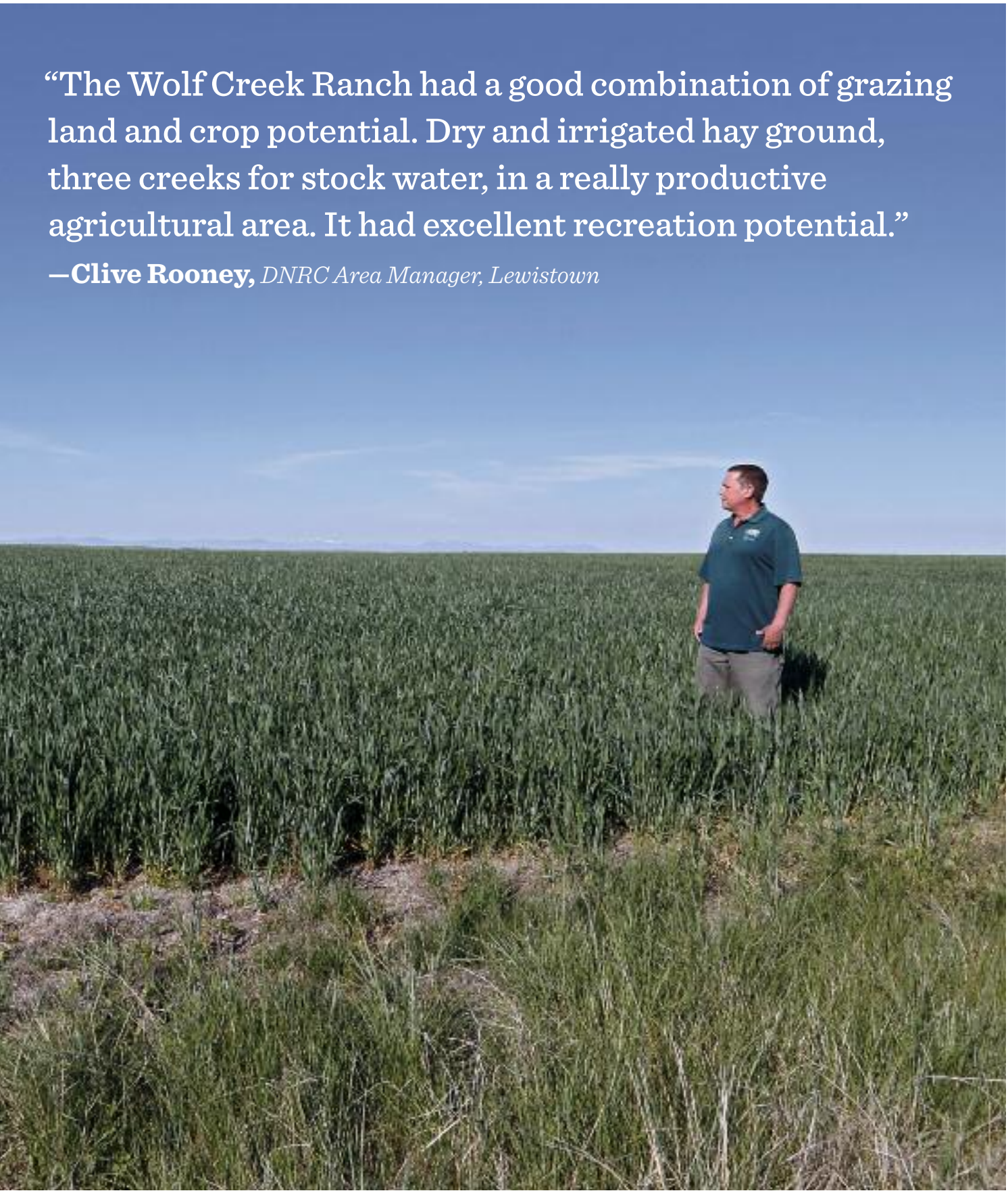
"Sometimes a quality deal just falls together. A little bit of luck and a little bit of patience helps too. Improving our land holdings is something I enjoy. It's challenging but really rewarding. These new properties are going to produce revenue and public benefits for a long time to come."

Recent sales generate Land Banking dollars

In September of 2016, DNRC completed the sale of 9,488 acres of trust lands to the Montana Department of Fish, Wildlife & Parks (FWP). These lands were located within the boundaries of the Sun River, Beartooth, and Blackleaf wildlife management areas owned by FWP. The sale process began in 2014, and provides DNRC with $11,146,000 for its Land Banking account. DNRC has also been banking revenues from the sales of other state parcels, including a number of state cabin site properties in Western Montana. Since 2014, the Land Banking Sale Program has sold approximately 6,321 acres valued at $5,992,598. Combined with the recent WMA sales, DNRC anticipates having $17,717,917 in the Land Banking fund by the end of 2016.

"The Land Banking Program has opened up new opportunities for the trust beneficiaries and the citizens of Montana by providing a program that allows the State to sell low producing, mostly inaccessible lands and replacing them with lands that provide increased recreational opportunities and much higher returns for the kids. During my tenure on the Land Board, we've increased public access and recreational opportunities by selling more than 57,000 acres that had no legal access and replacing them with over 67,000 legally accessible acres. In addition to the dramatic increase in recreational opportunities, these new lands produce 132% more."

—Linda McCulloch, Montana Secretary of State



"The Wolf Creek Ranch had a good combination of grazing land and crop potential. Dry and irrigated hay ground, three creeks for stock water, in a really productive agricultural area. It had excellent recreation potential."

—Clive Rooney, *DNRC Area Manager, Lewistown*

TWO WEEKS AWAY FROM DROUGHT

DNRC and the National Drought Resilience Partnership are building drought resilience in the Upper Missouri River Basin.

BY ALAN KESSELHEIM. PHOTO BY ELIZA WILEY

Around here, irrigators have a saying. "In Montana," they'll tell you, "we're always two weeks away from drought."

It might be a bit of exaggeration, but the next time two weeks of withering summer heat comes around just when you thought you were sitting pretty for moisture, you'll remember it. The same could be said for much of the semi-arid West. That, coupled with sobering climate changes cropping up in recent decades, makes Montana a perfect candidate for a national drought resilience project.

In 2014 the Missouri Headwaters Basin was selected by the National Drought Resilience Partnership (NDRP) as one of two pilot projects under the federal Climate Action Plan aimed at coordinating national agencies, state resources, non-governmental organizations (NGOs) and local watershed stakeholders in an effort to address drought.

"Up to now, most of what's been happening is drought response, which is crisis driven," says Ann Schwend, Drought Resilience Project Coordinator with Montana DNRC. "Our approach is more about mitigation, thinking about and preparing for drought conditions before they happen."

Easy to say. In fact, it sounds like a no-brainer, but when it comes to negotiating water, it's thornier than you'd think.

Water, its use and application, gets mind-numbingly complicated, and really touchy. Nothing riles the passions of local communities more than threatened water supply. Add to that a geography of almost 9 million acres in the Missouri River headwaters with demographics that encompass fast-growing cities, tourism economies and vast tracts of agricultural land. Within that, myriad local conditions, climate nuances, watershed dynamics, governing bodies and political winds blowing at every level, from rural irrigation districts to federal agencies.

"It is really all about process," says Schwend. "Our job has been to develop a system to address these issues and make it sing. In our case, we've realized that it has to be a ground-up approach, but one that leverages resources through regional and national partnerships. We have been really lucky to have Tina Laidlaw, with the MT Office of the EPA, to help coordinate the federal efforts".

"A lot of credit for making this work goes to Ann," says Melly Reuling, of the Center for Large Landscape Conservation in Bozeman, one of the NGOs involved in the pilot project. "Ann worked on the ground as a watershed coordinator, and she also knows the agency perspective. It takes that knowledge, and a lot of tenacity and creativity, to make this work."

Schwend has capitalized on DNRC's strategic position to funnel resources from above in the form of federal funding, data and technical expertise down to local communities and conservation districts. She has also tapped into local NGOs, watershed groups, and communities to find out where the needs are.

"We started by going to the local players and asking for their advice, trying to get a handle on their issues," Schwend says. "That was key, not to come in with some one-size-fits-all plan and try to force it on them. The fact is that even in this one basin, there is so much variation in conditions and local politics. Every watershed has its own unique situation. We try to be the catalyst to help move things forward.

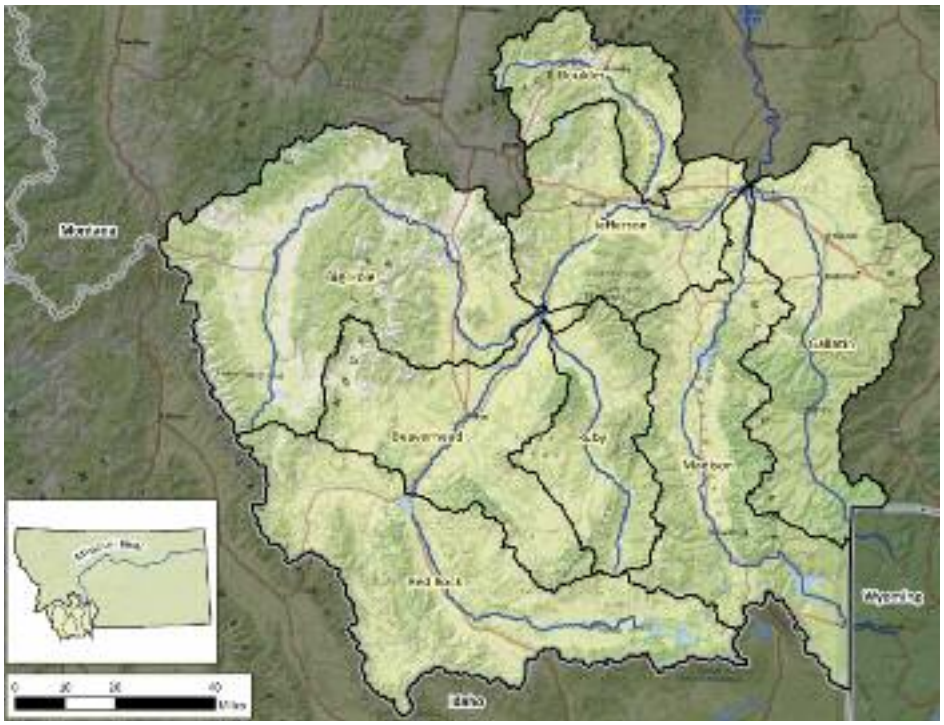
"Take the contrast between the Big Hole and other areas," adds Schwend. "The Big Hole Watershed Committee and their partners have been organizing for decades in response to a variety of issues, namely the threat of listing the fluvial Arctic Grayling. They have a network and a process in place, while other watersheds are just beginning the conversation."

"It is all about getting the stakeholders to communicate," agrees Reuling.

In the case of the Beaverhead and Ruby watersheds, the DNRC arranged for the placement of Big Sky Watershed AmeriCorps members and scraped together some funding to begin the process. Partner agencies and organizations helped facilitate meetings and lead workshops in communities around the basin, building relationships and a level of trust.

at a glance: **Missouri Headwaters Basin**

- 9 million acres
- More than 100,000 residents
- 6 counties
- Gallatin, Madison and Jefferson river systems comprised of thousands of tributaries



"The Big Hole Watershed Committee and their partners have been organizing for decades in response to a variety of issues, namely the threat of listing the fluvial Arctic Grayling." —**Ann Schwend,** *DNRC Drought Resilience Project Coordinator*

Far-reaching Impacts of Drought:

- Increased threat to drinking water security
- Decline in agricultural and recreational economies
- Increased stress to livestock, fish and wildlife
- Increased wildfire hazard
- Compromised water quality, forest and soil health

Drought Resilience Project Goals:

- Provide tools for monitoring and forecasting conditions
- Develop local and regional planning capacity
- Implement local projects to mitigate drought

DNRC is in the unique position to be able to bring federal resources to bear, from the NRCS Snotel network to NOAA, from the EPA to the National Drought Mitigation Center. At the same time, it can assist individual irrigation districts that have been working out the nuances of their particular drainages for generations with shovels and boards at head gates. That level of complicated, two-way coordination could potentially overwhelm a local community.

DNRC is also broadening the scope of mitigation by looking at upstream forest management, wetland storage, long-term snowpack and weather data to prepare for the inevitable cycles of drought that come to Montana. Too often, an individual farmer, or even a local community, is too busy and focused to take in the bigger picture, never mind finding ways to communicate about it.

A year into the demonstration project, DNRC published a work plan for the basin, based on local input.

"The lights have started to come on for many," says Schwend. "Local people who were hesitant to talk to us a year ago are saying that they think this is a good idea. County Commissioners are urging their communities to get involved. And federal agencies like FEMA are signing up. We are starting to connect the dots."

At this point Schwend and her counterparts are poised to move beyond the pilot project phase and to apply their strategy around the state. Schwend hopes to refine a pilot online training module for other water basins around Montana in an effort to mimic the successes they've had in the Missouri Headwaters.

"We're morphing from the demonstration phase into an ongoing process where people are proactively planning for drought before it's too late," says Schwend.

The hope is that the next time those tough two weeks cycle around, Montana will be ready.

FORESTS IN FOCUS

New partnerships and new opportunities tackle the challenges facing Montana's forest health.

When Montana Governor Steve Bullock announced the Forests in Focus Initiative in July of 2014, he noted that Montana was "at a crossroads with forest health, our mills and the future condition of our forests."

As the lead agency in implementation of Forests in Focus, the DNRC's Forestry Division works across the four key areas of the Initiative to maximize benefits of investing state funds toward forest restoration on all land ownerships.

Forest Restoration & Industry Retention

Meeting the challenge of restoration and sustainable forest management relies upon a skilled forest industry workforce and viable milling and manufacturing facilities Simply put, healthy forests need healthy mills and vice versa. Supply continues to be the primary issue related to keeping the state's forest industry intact and positioned to help meet forest restoration needs. Tree mortality from wildfires and bark beetles adds substantially to the accumulation of forest fuels which are of particular concern when wildfires burn within the wildland urban interface. Additionally, root disease impacts an estimated 3 million acres of Montana forests. Forests in Focus funding was invested in a project at the popular Jumping Creek campground near White Sulphur Springs, which had been closed due to the risk of large trees with root disease falling onto the campsites or on picnic areas. DNRC partnered with the White Sulphur Springs Ranger District of the Forest Service to remove the hazard trees and design an interpretive sign for visitors explaining the project. Additionally, chips produced from small diameter biomass will be used by the Montana Department of Environmental Quality at a nearby mine. This project was the first in Montana to use Good Neighbor Authority under the 2014 Farm Bill. This is one example where a commercial timber harvest was integral to restoring forest health as well as enhancing recreational opportunities. The campground re-opened in July.

Tribal, State & Private Forests

Just like wildfires, forest health concerns do not adhere to ownership boundaries. To glean landscape-level impact with regard to forest health, wildlife habitat, fuels reduction and other benefits, it's important to design and implement projects across tribal, state and private ownerships in addition to the national forests. To this end, Forests in Focus has provided $4 million dollars in cost-share assistance for projects resulting in stewardship of forested lands for a variety of objectives and benefits. 22 projects received funding and completion of these projects will yield an estimated 26 million board feet of timber volume for Montana mills and manufacturers. In fact, every major mill in Montana has or will receive logs from Forests in Focus investments. These investments have

Large slash piles are chipped and hauled away from Jumping Creek Campground, the site of the first completed Good Neighbor Authority Project in Montana

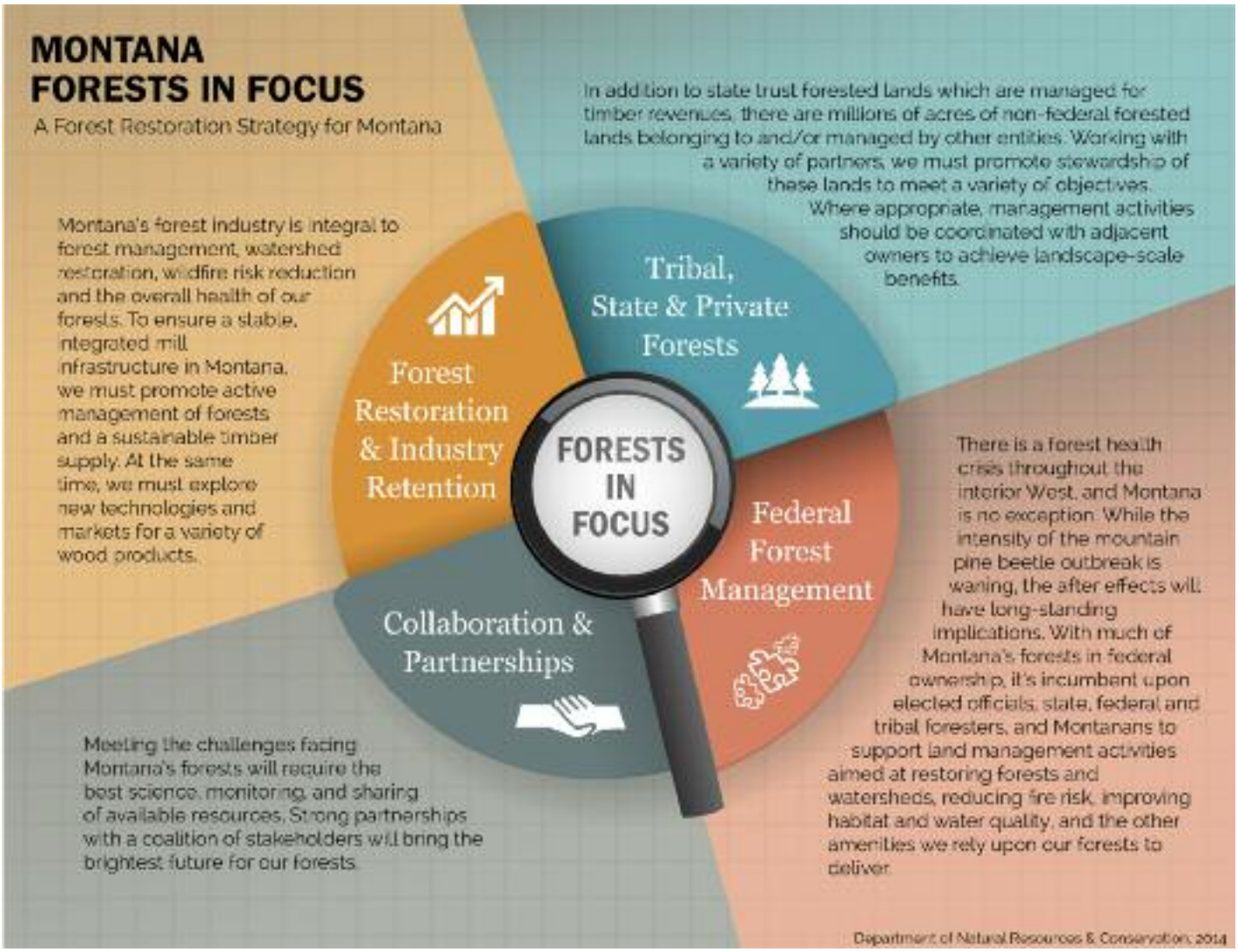
led to creation or retention of more than 250 jobs within Montana's forest industry, and many more indirect positions.

Federal Forest Management

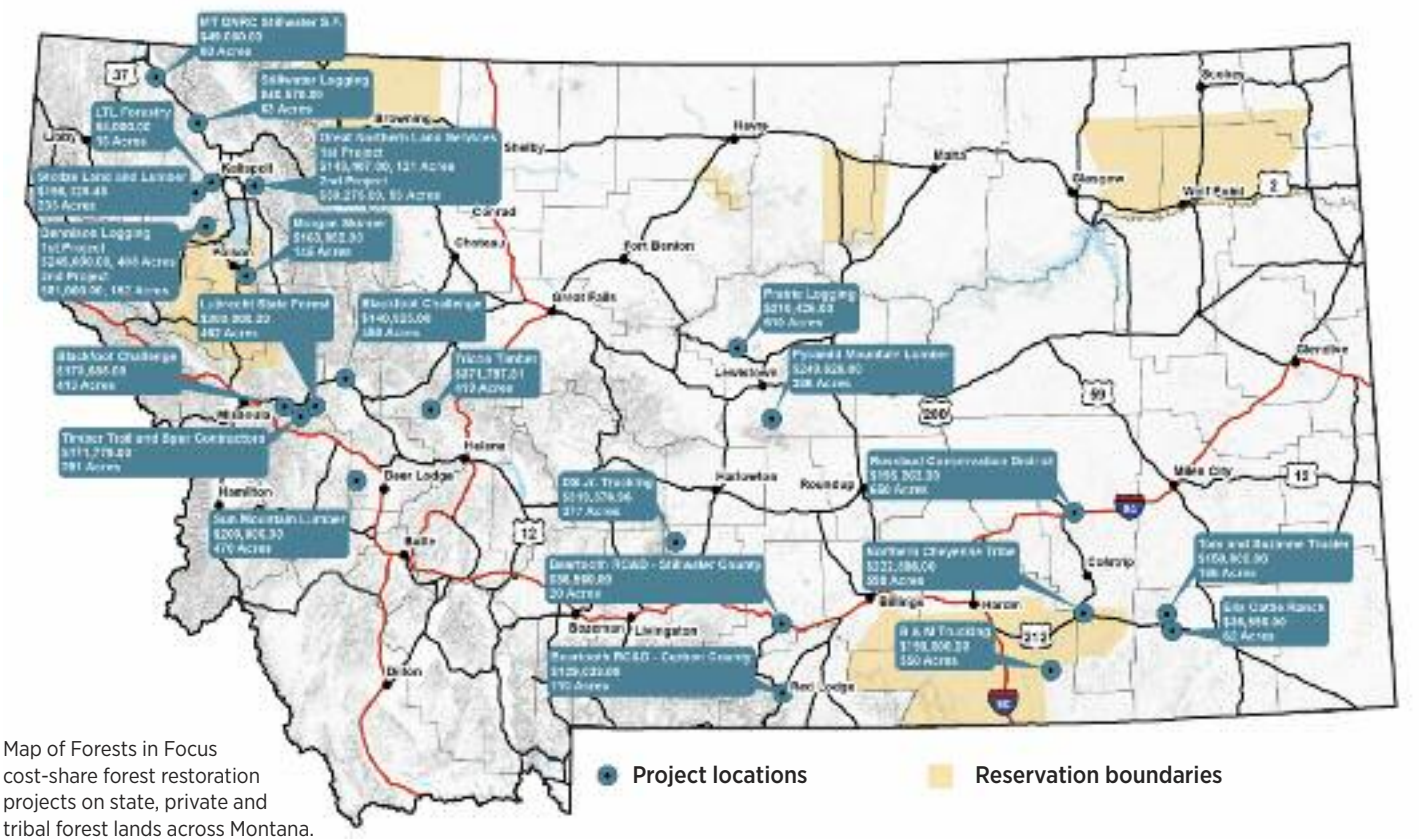
With so much of Montana's forested landscape managed by the United States Forest Service, Forests in Focus provided the opportunity for DNRC to actively lean into federal forest management and engage with the Forest Service to maximize opportunities created in the 2014 Farm Bill. This process began in earnest when the governors in states with national forest system lands were given the opportunity to identify forested areas with significant forest health of wildfire risks and nominate them for designation as "priority landscapes" for which special Farm Bill authorities could apply to increase the pace and scale of much-needed forest restoration. In Montana, close to five million acres were nominated, and nearly all of them were approved and designated. This important process provided the Forest Service with new tools for planning, evaluating and implementing projects. To further demonstrate its commitment to supporting the Forest Service in Farm Bill implementation, Forests in Focus provided $2 million dollars for state investments in federal forest management projects. DNRC also hired the first of two liaison positions to provide oversight of state investments and guidance to the agency regarding state priorities and opportunities to collaborate on new projects.

The state's investment in federal forest management has yielded many benefits: some of them are immediate and others will be realized well into the future. One example of a project which has yielded immediate benefits is the Upper Sheep Creek project, which utilized a categorical exclusion authority granted by the Farm Bill. With a state investment of $75,000 from Forests in Focus, the Forest Service increased their capacity for analysis of the project, enabling them to analyze a substantially larger project area. Ultimately, this resulted in a decision that tripled the amount of acres to be treated under the project. Additionally, the Forest Service made excellent use of the benefits of the Farm Bill authority, moving from project initiation to a final decision in eight months—about a third of the time it took for a smaller project on the same national forest using the conventional process.

The Northern Region of the Forest Serv-



Montana Forests in Focus: State, Private and Tribal focus areas



Map of Forests in Focus cost-share forest restoration projects on state, private and tribal forest lands across Montana.

ice, which includes Montana, northern Idaho and North Dakota, has emerged as the agency leader in implementation of the new authorities of the Farm Bill. The partnership between the Montana DNRC and the Northern Region has elevated both agencies with regard to the Farm Bill and the Forests in Focus Initiative in Montana.

Collaboration & Partnerships

In announcing Forests in Focus, Governor Bullock called upon land managers, timber industry representatives, the conservation community, private landowners, elected officials and others to work together to meet the challenges facing Montana's forests. Collaboration and partnerships are the foundation of Forests in Focus as they are not only integral to successful implementation of projects, but also in creating a sustainable framework for future forest restoration efforts.

Two collaborative groups received Forests in Focus funding to enhance their capacity to effectively engage with the Forest Service on projects of interest. These groups utilized funding to bring in subject matter experts, pay for facilitation and other activities to expand their ability to participate in productive and meaningful dialogue with a multitude of stakeholders.

Beyond collaborative groups, there is an important role for local government officials to play in the discussion of federal forest management. County commissioners—particularly those in the forested counties—have vested interest in forest management from a number of vantage points, including wildfire protection, economic stability and environmental considerations. To assist the counties with federal forest engagement, the DNRC

Project timeline comparison

hired a second liaison position—a Local Government Forest Advisor—to provide assistance to local governments on projects that address forest health or wildfire risk. The Local Government Forest Advisor works to assess current county capacity, build additional capacity through training and other resources, empower county officials to use the tools available for engaging with federal partners, and engage with the Montana Association of Counties and the Montana Forested Counties Coalition to promote proactive federal forest management. The DNRC also provides grant funding to assist with activities which support local government engagement on forest management issues.

The opportunities presented by the Farm Bill, the Forests in Focus Initiative and other policy resources point to a promising future for forest restoration, sustainable forest management and collaboration on these important land management issues which will have lasting benefit for Montana's forests and the important ecological benefits that healthy forests contribute to the everyday lives of residents and visitors to Big Sky Country.

State Funds Benefit Project Outcomes

- State funds are allowing many projects to move forward ahead of their planned timeframes, increasing the pace of some decisions by one to two years.
- By adding capacity in the form of additional seasonal workers and contractors, state funds are both quickening time to decision while also expanding the acreage and restoration outcomes of projects.
- By providing funds directly to collaborative groups and for citizen monitoring, state funds are increasing citizen engagement in federal land management.
- State funds have been used to hire and train Montana Conservation Corps (MCC) crews.
- State funding is supporting Montana jobs to accomplish added restoration work and for project planning.

CLOSE, BUT

Blackfeet Water Compact

STILL NOT THERE.

awaits approval on the U.S. Senate floor

Montana Department of Natural Resources & Conservation

Negotiating tribal reserved water rights is among the most complex, time-consuming, politically-charged and costly undertakings faced by western states. When Governor Steve Bullock on April 24, 2015, signed into law the water compact between the State of Montana and the Confederated Salish and Kootenai Tribes (CSKT), it became the seventh and final agreement involving tribal nations in Montana.

It's an enormous achievement.

That's not to say the work is finished. The CSKT compact has moved to the nation's capital, where it received a hearing in the Senate Indian Affairs Committee on June 29, 2016. As the CSKT agreement begins to make the rounds in Congress, the compact for Montana's Blackfeet Tribe is generating real anticipation. Signed in 2009 by Governor Brian Schweitzer, the compact has largely completed the arduous approval and review process, and there remains a chance the settlement could be passed before Congress adjourns in 2016.

"We're as close as we've ever been, but we're still not there," says Harry Barnes, Chairman of the Blackfeet Tribal Council. "It passed through the Senate Committee on Indian Affairs for the first time in five years. It's now waiting for a final vote on the Senate floor, but we don't know when that will be scheduled. Our concern is that there are not many legislative dates left, and election season makes it problematic."

On September 15, 2016, Senators Jon Tester and Steve Daines pushed the authorization of the Blackfeet Water Compact through the U.S. Senate. As members of the Senate Indian Affairs Committee, Tester and Daines worked together to include authorization for the Blackfeet Compact in the Water Resources Development Act (WRDA), which passed the Senate 95-3.

"Access to clean water is vital for the health and safety of every community," says Montana U.S. Senator Jon Tester. "This historic agreement has been years in the making, and it provides certainty for local families, businesses, farms and ranches. We are taking steps in the right direction, but we still have a long way to go in order to do right by Blackfeet."

The Blackfeet and CSKT compacts face a different legislative environment and process than did the compacts before them. Gridlock in Congress has reached unprecedented levels. And the process of advancing a water compact through Washington has changed since the ban on earmarks.

Last fall, when Rep. Rob Bishop (R-UT) assumed the chairmanship of the House Natural Resources Committee, he laid out new guidelines to states for moving water settlements through Congress. The first step requires that the administration forward the settlement to Congress to avoid the appearance of a lawmaker's special interest. Next, the departments of Justice and Interior must submit letters to the chairman stating the federal funding required under the agreement represents a better use of tax dollars than the projected cost of litigation.

Educating House members has also been a key part of the process, says Barnes.

"Many of them see this as an entitlement for the Indians when in reality it's a foregoing of a tribe's past water claims," Barnes says. "Ours is a $427 million compact. All of that money is tied up in projects. No funds go to the tribe in the form of cash, and all of the projects are defined in the compact."

The current bill includes $35 million from the State of Montana, $20 million of which will go towards the construction of a new pipeline to deliver water from Four Horns Reservoir on the reservation to Birch Creek to meet the needs of off-reservation water users; the remaining $14.5 million is compensation to the tribe for not exercising its water right on Birch Creek, and for providing water through the pipeline until the 25th year of the settlement.

The compact establishes the Blackfeet Tribe's water rights on six drainages within the reservation, including the Milk and Two Medicine rivers.

Federally-funded projects would include modernizing and expanding the Blackfeet Irrigation Project, constructed by the Bureau of Indian Affairs in the early 1900s, along with construction of new municipal water systems and expansion of systems already in place. Federal funds would also go into a general development fund for work on other water projects such as new irrigation works on Cut Bank Creek, and a bank stabilization project on Swiftcurrent Creek. These and other projects will take a number of years to complete and the funds will not be available all at once.

"We've assessed all irrigable lands, and there's some opportunities to expand agricultural operations," says Jerry Lunak, the Blackfeet tribe's Director of Water Resources. "We want to upgrade the efficiency of existing irrigation systems for members and nonmembers – going from ditches to wheel lines and pivots on some of the tribal properties. In the end it means water savings, both for us and our neighbors."

If Congress approves the Blackfeet compact, there will be one final hurdle: ratification by a majority of tribal members. "We have a very favorable tribal council right now," says Lunak, "all of them are fully engaged in the compact process."

"We have a lot of members who will be affected by this," says Barnes. "We've been accused of selling off our water. Internally we have to continue that education process."

Representative Dan Salomon, R-Ronan,

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Top: Badger Creek below Four Horns Canal near Browning looking downstream from gauge house. Above: the Blackfeet Tribal Business Council.

was appointed to the RWRCC in 2011 and served through passage of the CSKT compact. "Serving on the RWRCC was a tremendous experience," he says. "Learning how to bring so many diverse interests together in a negotiated settlement while maneuvering through federal, state and tribal water laws was difficult and frustrating but well worth it.

"Negotiation allows all factors to be considered and a plan made that addresses all issues at once," Salomon says. "Taking all current claims and laws, then looking to the future with a lot of common sense by the parties involved. No party got everything they wanted, but they got an agreement that protected their interests into the future."

Amidst the political intrigue, the settlement details and implementation costs, Lunak says it's essential to understand the historical and cultural implications of the compact for the Blackfeet people.

"Water for us is historical. There's a value there historically because of this place and this tribe that's beyond practical. We made a treaty in 1855 and those leaders chose this place for us. They picked this place, with the waters of the Missouri River, and they had to have known that seven generations later it was going to become a very big issue with regard to our future. And it has. It's forcing us to grow in new ways.

"Two of my grandfathers signed the Treaty of 1855. That's pretty profound to me. I'm sitting here working through issues they set in motion."

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